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SALL, EL HADJI MALICK

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/008,091	STEWART ET AL.
	Examiner	Art Unit	
	El Hadji M. Sall	2157	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>13 June 2005</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-56</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-5,7-24,26-32,34-48 and 50-56</u> is/are rejected.

7) ☒ Claim(s) <u>1, 6, 25, 27, 33, 49 and 51-56</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the application filed on June 13, 2005. Claims 1-56
are pending. Claims 6, 25, 33 and 49 are amended. Claims 1-56 represent methods
and apparatus for using SCTP to provide mobility of a network device.

2.   *Claim Objections*

Claims 1, 27 and 51-56 are objected to because of the following informalities:

SCTP is mentioned without giving its full spelling, Examiner recommended SCTP be

changed to "Stream Control Transmission Protocol (SCTP)", on line 1 of claims 1, 27,

51, 52, 54 and 55, and on line 2 of claim 53 and 56. Appropriate correction is required.

3.   *Allowable Subject Matter*

Claims 6, 25, 33 and 49 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

4.   ***Claim Rejections - 35 USC § 102***

. A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent
by another filed in the United States before the invention thereof by the applicant
for patent, or on an international application by another who has fulfilled the
requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before
the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act
of 1999 (AIPA) and the Intellectual Property and High Technology Technical
Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting
directly or indirectly from an international application filed before November 29, 2000.
Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior
to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5.   Claims 1-5, 7-24, 26-32, 34-48 and 50-56 are rejected under 35 U.S.C. 102(e) as
being unpatentable over Turina et al. U.S. 6,826,198.

Turina teaches the invention as claimed including signaling transport protocol
extensions for load balancing and server pool support (see abstract).

As to claims 1, 27, 51, 52, 53, 54, 55 and 56, Turina teaches in a first network
device and a second network device, a method, a first network device adapted, a
computer-readable medium and a second network device adapted for modifying an
SCTP association between the first network device and a second network device, the
SCTP association including a first set of IP addresses associated with the first network

device and a second set of IP addresses associated with the second network device, the method comprising:

a processor (column 4, lines 17-19).

a memory, at least one of the processor and the memory being adapted for:

establishing the SCTP association between the first network device and the second network device (figure 3); and

sending an SCTP configuration message from the first network device to the second network device, the configuration message indicating a modification to be made to the SCTP association, thereby enabling the SCTP association to be modified without disconnecting an existing session (column 8, lines 2-5, Turina discloses a signaling message exchange between the signaling SCTP source node and a signaling SCTP target node; column 2, line 62 – column3, line2, Turina discloses the signaling connection control protocol (SCCP) may be changed during operation without affecting the upper user layer; column 6, lines 61-65, Turina discloses members of a server pool may be added or removed at any time without server interrupt. SCTP supports multiple IP addresses from the same host, and treat the data streams from these addresses as one session. It does not require strict order of delivery like. If there is modification in one data stream, the others are allowed to continue).

As to claim 2, Turina teaches the method as recited in claim 1, wherein sending the SCTP configuration message from the first network device to the second network device is performed when a new IP address is assigned to the first network device (column 6, lines 32-41, Turina discloses each SCTP endpoints assigned to receive SCTP user protocol data packets).

As to claim 3, Turina teaches the method as recited in claim 1, wherein sending the SCTP configuration message from the first network device to the second network device is performed when a new network interface card is added to the first network

device (column 3, lines 6-10, Turina discloses mapping data interface unit adapted to distribute signaling association via the SCTP).

As to claims 4 and 31, Turina teaches the method as recited in claims 1 and 27, further comprising:

receiving an SCTP acknowledgement message from the second network device acknowledging receipt of the SCTP configuration message (column 10, lines 15-22, Turina discloses a connection acknowledgement message then follows the same SCTP association linked on the source node and the target node).

As to claims 5 and 32, Turina teaches the method as recited in claims 4 and 31, wherein the SCTP acknowledgement message further acknowledges that the SCTP association has been modified corresponding to the SCTP configuration message (column 10, lines 20-22, Turina discloses a connection acknowledgement message follows the same SCTP association linked on the source node and the).

As to claims 7 and 34, Turina teaches the method as recited in claims 1 and 27, wherein the first network device is a Mobile Node supporting Mobile IP (column 8, lines 21-32, Turina discloses the mobile of servers supports mobile terminals, and the name translation is supported in the area of the IP network).

As to claims 8 and 35, Turina teaches the method in claim 1, wherein the SCTP configuration message indicates that a specified IP address is to be added to the first set of IP addresses in the SCTP association (column 6, lines 32-36, Turina discloses each SCTP endpoint has a list of transport addresses assigned to multiple IP addresses).

As to claims 9 and 37, Turina teaches the method as recited in claims 1 and 27, wherein the SCTP configuration message indicates that a specified IP address is to be established as a primary address in the first set of IP addresses in the SCTP

association via which to send and receive messages (column 3, lines 61-67, Turina discloses a fault management unit adapted to detect an inoperative signaling transport address in a peer signaling association and to select another signaling transport address).

As to claim 10, Turina teaches the method as recited in claim 9, wherein sending the SCTP configuration message from the first network device to the second network device is performed when the first network device determines that the specified IP address provides a better signal than the first set of IP addresses that were previously in the SCTP association (column 8, lines 1-5, Turina discloses each SCTP points to a plurality of IP addresses that may be used for signaling message exchange between the signaling source node and the signaling target node).

As to claim 11, Turina teaches the method as recited in claim 9, wherein the first network device is a Mobile Node, and wherein the specified IP address is an IP address of a network location to which the Mobile Node has roamed (column 8, lines 21-32, Turina discloses the pool of servers supports mobile terminal originating signaling traffic, and network element MSC1 or RNC1 may use a destination name for exchange of signaling traffic).

As to claims 12 and 39 Turina teaches the method as recited in claims 1 and 27, wherein the SCTP configuration message indicates that a specified IP address is to be removed from the first set of IP addresses in the SCTP association (column 6, lines 61-65, Turina discloses members of a server pool can be removed at any time without server interrupt).

As to claim 13, Turina teaches the method as recited in claim 12, wherein sending the SCTP configuration message from the first network device to the second network device is performed when the first network device determines that the specified IP address does not provide an adequate signal (column 8, lines 52-59, Turina

discloses hosts for the name mapping are provided in the IP network, as soon as on host is inoperative due to failure).

As to claim 14, Turina teaches the method as recited in claim 12, wherein the first network device is a Mobile Node, and wherein the specified IP address is an IP address of a network location associated with a prior network location of the Mobile Node (column 8, lines 21-32, Turina discloses the pool of servers supports mobile terminal originating signaling traffic, and network element MSC1 or RNC1 may use a destination name for exchange of signaling traffic).

As to claims 15 and 40, Turina teaches the method as recited in claims 1 and 27, wherein the SCTP configuration message includes at least one of an ADD message indicating that a first IP address is to be added to the first set of IP addresses, a SET PRIMARY message indicating that a second IP address is to be established as a primary address in the first set of P addresses via which to send and receive messages, and a REMOVE message indicating that a third IP address is to be removed from the first set of IP addresses in the SCTP association (column 6, lines 61-65, Turina discloses members of a server pool can be removed at any time without server interrupt).

As to claims 16 and 41, Turina teaches the method as recited in claims 15 and 40, wherein the first address is the second address (column 10, lines 19-22, Turina discloses the same SCTP follows the connection acknowledgement which is both linked on the signaling source node and the signaling target node).

As to claims 17 and 42, Turina teaches the method as recited in claims 15 and 40, wherein an order is specified for performing at least one of the ADD message, the PRIMARY message, and the REMOVE message (column 6, lines 61-65, Turina discloses members of a server pool can be added or removed at any time without server interrupt).

As to claim 18, Turina teaches the method as recited in claim 1, wherein the first network device is a Mobile Node, the method further comprising:

roaming to a network location (column 2, lines 31-34, Turina discloses receiving a signaling target node name from the source node to map the signaling target node name into a peer signaling);

obtaining a new IP address associated with the new network location (column 6, lines 32-41, Turina discloses each SCTP endpoints assigned to receive SCTP user protocol data packets);

wherein the SCTP configuration message indicates that the new IP address is to be added to the first set of IP addresses (column 3, lines 6-10, Turina discloses mapping data interface unit adapted to distribute signaling association via the SCTP).

As to claim 19, Turina teaches the method as recited in claims 18, wherein the SCTP configuration message further indicates that one of the IP addresses in the first set of IP addresses is to be removed from the first set of IP addresses (column 6, lines 61-65, Turina discloses members of a server pool can be removed at any time without server interrupt).

As to claims 20 and 45, Turina teaches the method as recited in claims 19 and 44, wherein the one of the IP addresses to be removed from the first set of IP addresses is a Home Address associated with the Mobile Node (column 8, lines 21-32, Turina discloses the pool of servers supports mobile terminal originating signaling traffic, and network element MSC1 or RNC1 may use a destination name for exchange of signaling traffic).

As to claims 21 and 46, Turina teaches the method as recited in claims 18 and 43, wherein the SCTP configuration message further indicates that the new IP address is to be a primary address via which the Mobile Node is to send and receive packets

(column 6, lines 32-41, Turina discloses each SCTP endpoints assigned to receive or originate SCTP user protocol data packets).

As to claim 22, Turina teaches the method as recited in claim 18, wherein the first set of IP addresses is associated with a single network interface card (column 8, lines 33-35, Turina discloses the usual protocol stack needs only one interface from the user adaptation layer).

As to claims 23 and 47, Turina teaches the method as recited in claims 1 and 27, wherein the SCTP configuration message comprises one or more SCTP packets (column 2, lines 223-27, Turina discloses a signaling control layer SCTP of the protocol stack on top of a packet transfer network IP for exchange of signaling data).

As to claims 24 and 48, Turina teaches the method as recited in claims 1 and 27, the method further comprising:

appending a chunk to an SCTP packet, the chunk including the SCTP configuration message (column 6, lines 26-31, Turina discloses the SCTP provides SCTP association set-up and shut-down, data acknowledgement, packet validation and path management).

As to claims 26 and 50, Turina teaches the method as recited in claims 24 and 48, wherein the chunk composes one or more parameters, each of the parameters having a value and an associated parameter type selected from the group consisting of ADD indicating that an IP address indicated by the value is to be added to the first set of œ addresses, REMOVE indicating that the IP address is to be removed from the first set of IP addresses, and SET PRNARY indicating that the IP address is to be established as a primary address via which the first network device is to send and receive messages (column 6, lines 61-65, Turina discloses members of a server pool can be removed at any time without server interrupt).

As to claim 28, Turina teaches the method as recited in claim 27, further comprising:

modifying the SCTP association in response to the configuration message (column 5, lines 62-64, Turina discloses the layer SUA user to use the host name based addressing initiating a new signaling transaction).

As to claim 29, Turina teaches the method as recited in claim 28, wherein the SCTP configuration message indicates a lookup address associated with the SCTP association, the method further comprising:

obtaining the association (column 3, lines 27-33, Turina discloses the target node. name resolution unit is adapted to map a destination name into the peer signaling association according to a specified algorithm or a table lookup technique).

As to claim 30, Turina teaches the method as recited in claim 29, further comprising:

verifying the association using the lookup address (column 3, lines 32-33, Turina discloses a table lookup which can be used to verify association).

As to claims 36 and 38, Turina teaches the method as recited in claim 35, further comprising:

sending a message to one of the first set of P addresses in the SCTP association (column 8, lines 2-5, Turina discloses a signaling message exchange between the signaling SCTP source node and a signaling SCTP target node).

As to claim 43, Turina teaches the method as recited in claim 27, wherein the first network device is a Mobile Node supporting Mobile IP and the second network device is a Correspondent Node (column 8, lines 21-32, Turina discloses the mobile of servers supports mobile terminals, and the name translation is supported in the area of the IP network).

As to claim 44, Turina teaches the method as recited in claim 43, wherein the SCTP configuration message further indicates that one of the IP addresses in the first set of IP addresses is to be removed from the first set of P addresses. (column 6, lines 61-65, Turina discloses members of a server pool can be removed at any time without server interrupt).

6.   *Response to Arguments*

Applicant's arguments filed on 06/13/05 have been fully considered but they are not persuasive.

In reply, the claims are written broadly and are therefore interpreted broadly.

(A)   Applicant argues that there is no indication in Turina that a previously established SCTP association is modified as a result of the name mapping, or in order to achieve the name mapping. More specifically, Turina fails to disclose or suggest modifying the set of IP addresses in an SCTP association.

In regards to point (A), examiner respectfully disagrees.

Features such as established SCTP association is modified as a result of the name mapping, or in order to achieve the name mapping. More specifically, Turina fails to disclose or suggest modifying the set of IP addresses in an SCTP association are not in the independent claims.

(B)   Applicant argues that Turina fails to disclose adding an IP address to an SCTP association or removing an IP address from an SCTP association. It is also

important to note that the server pool of Turina is not modified via an SCTP

configuration message sent between two members of an SCTP association.

     In regards to point (B), examiner respectfully disagrees.

     Column 6, lines 61-65, Turina discloses members of a server pool can be

removed at any time without server interrupt (i.e. it is inherent that member of server

pool have IP addresses assigned to them, and when they are removed, IP addresses

are removed from the "SCTP association" as well.

     Furthermore, features such as "the server pool of Turina is not modified via an

SCTP configuration message sent between two members of an SCTP association" are

not in the claims.

     (C)   Applicant argues that Turina fails to disclose or suggest modifying an

SCTP association. In fact, Turina neither discloses nor suggests sending an SCTP

configuration message from the first network device to the second network device,

where the configuration message indicates a modification to be made to the SCTP

association. While Turina discloses the general signaling performed to establish an

SCTP association in relation to the disclosed name mapping invention, Turina fails to

disclose any SCTP signaling to subsequently modify the SCTP association..

     In regards to point (C), examiner respectfully disagrees.

     Column 8, lines 2-9, Turina discloses a signaling message exchange between

the signaling SCTP source node and a signaling SCTP target node. Further, each

SCTP association may also point to a group of criteria for use within the name of

translation process.

Column 9, line 23 to column 10, line 22, Turina discloses 10 steps of signaling

message between the signaling source node and the signaling target node. As a

prerequisite of the SCTP, associations have to be set up and the DDP/ENRP name

translation service has to be initialized, and on step 2, the name translation service to

translate the hostname to an SCTP association; and on step 9, the user adaptation part

SUA uses the received primitive to fetch the new data (i.e. inherently modification of the

SCTP took place), furthermore, it is inherent that during the translation of the hostname

to an SCTP association, "the SCTP signaling is modifying the SCTP association".

(D)   Applicant argues that With respect to claim 2, Turina fails to disclose

sending an SCTP configuration message from the first network device to the second

network device when a new IP address is assigned to the first network device. See col.

6, lines 32-41. Similarly, with respect to claim 3, Turina says nothing about sending the

SCTP configuration message when a new network interface card is added to the first

network device..

In regards to point (D), examiner respectfully disagrees.

Column 6, lines 32-41, Turina discloses each SCTP endpoint has a list of

transport addresses assigned thereto- i.e. multiple IP addresses-to receive or originate

SCTP user protocol data packets, and the list of transport addresses is used by the two

SCTP endpoints (i.e. inherently in the list of addresses, it is included new addresses that are assigned to the "first network device".

(E)   Applicant argues that With respect to claims 4 and 31, Turina fails to disclose or suggest receiving an SCTP acknowledgement message acknowledging receipt of the SCTP configuration message. Similarly, with respect to claims 5 and 32, Turina fails to disclose or suggest acknowledging that the SCTP association has been modified corresponding to the SCTP configuration message.

In regards to point (E), examiner respectfully disagrees.

Column 9, line 23 to column 10, line 22, Turina discloses a connection acknowledgement message then follows the same SCTP association linked on the source node and the target node on step 10 (i.e. it is inherent that the "modification of the SCTP association" taught in Turina inherently establish "acknowledgement message acknowledging receipt of the SCTP configuration message).

(F)   Applicant argues that With respect to claims such as 7 and 34, while Turina briefly mentions mobile servers and mobile terminals, Turina neither discloses nor suggests application of the presently claimed invention to Mobile Nodes in the manner claimed. While Turina discloses the use of servers that support mobile terminals, Turina fails to disclose or suggest, as recited in claims 11 and 14, that the first network device is a Mobile Node and the specified P address is an IP address of a network location of the Mobile Node (e.g., to which the Mobile Node has roamed). This

argument is equally applicable to claim 18. Similarly, with respect to claims 20 and 45, Turina fails to disclose or suggest the removal of a Home Address of a Mobile Node. In addition, with respect to claims 21 and 46, Turina fails to disclose or suggest that the address to be set as a primary address is an address via which the Mobile Node is to send and receive packets..

In regards to point (F), examiner respectfully disagrees.

Column 8, lines 21-32, Turina discloses the mobile of servers supports mobile terminals, and the name translation is supported in the area of the IP network (i.e. it is inherent "the first network device is a Mobile Node and the specified P address is an IP address of a network location of the Mobile Node").

(G)   Applicant argues that With respect to claims 8 and 35, while Turina discloses general information regarding SCTP associations, Turina says nothing about adding an IP address to a set of IP addresses in an SCTP association via an SCTP configuration message sent between two network devices between which the SCTP association has been established. Similarly, with respect to claims 12, 39, and 19 Turina says nothing about removing an IP address from an SCTP association via an SCTP configuration message.

In regards to point (G), examiner respectfully disagrees.

Column 6, lines 32-36, Turina discloses each SCTP endpoint has a list of transport addresses assigned to multiple IP addresses (i.e. it is inherent in the list of

transport addresses assigned to multiple IP addresses, in each SCTP endpoint, adding

and removing IP addresses took place during the process).

(H)   Applicant argues that With respect to claims 9 and 37, while Turina may

generally disclose the detection of an inoperative signaling transport address, Turina

fails to disclose or suggest establishing a primary address in the SCTP association via

an SCTP configuration message. Furthermore, Turina fails to disclose or suggest

sending such an SCTP configuration message when the network device determines

that the address to be set as the primary address provides a better signal than those

that were previously in the SCTP association, as recited in claim 10.

In regards to point (H), examiner respectfully disagrees.

Column 3, lines 61-67, Turina discloses a fault management unit adapted to

detect an inoperative signaling transport address in a peer signaling association and to

select another signaling transport address (i.e. "when the network device determines

that the address to be set as the primary address provides a better signal than those

that were previously in the SCTP association").

(H)   Applicant argues that With respect to claims 15 and 40, the Examiner

merely indicates that Turina discloses that members of a server pool can be removed at

any time. Turina fails to disclose that an SCTP configuration message includes at least

one of an ADD message, a SET PRNARY message, and a REMOVE message, as

claimed. As such, Turina fails to disclose performing at least one of these messages in a particular order, as recited in claims 17 and 42.

In regards to point (H), examiner respectfully disagrees.

column 6, lines 61-65, Turina discloses members of a server pool can be added or removed at any time without server interrupt (i.e. it is inherent that when members of server pool are removed, "messages are added or removed" in order to keep messages available all the time through load sharing).

7.   *Conclusion*

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to El Hadji M Sall whose telephone number is 571-272-

4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
Patent Examiner
Art Unit: 2157